

# UTAH Conservation SHOWCASE



## Drip System Improves Survival Rate of Northern Utah Fruit and Nut Trees

A drip irrigation system has improved survival of fruit and nut trees planted on Carol Petersen's tree farm in Thatcher. The 35-acre farm on east-facing foothills in the most northern county in Utah offers some unique challenges to growing fruit and nuts. It is one of the research farms that support hardiness research conducted by a non-profit, Improving Perennial Plants for Food and Bioenergy (IPPFBE), founded by Petersen and her late father, Dr. C. Reed Funk, a renowned Rutgers University plant breeder.

In 1999 her parents went on a plant collecting tour to Uzbekistan in Central Asia. They brought back pistachio seeds and planted them, along with some hardy apricot trees, on the rocky hillside of her Utah farm. They thrived and succeeded, so about 13 years later she and her husband, Brian, decided to expand and build a new orchard on a 20-acre patch of lower rocky farmland. The big challenge was to find a way to irrigate the new orchard more efficiently, since they had been hand watering the smaller orchard from a tank in a pickup truck.

As they studied the irrigation situation, Petersen contacted the USDA's Natural Resources Conservation Service (NRCS) field office in Tremonton and were pleased with the help they received. Soil Conservationist Allen Hales helped them develop a plan for a drip irrigation system and the establishment of a cover crop between the tree rows. They applied for and received financial assistance from the Environmental Quality Incentives Program (EQIP). The upper half of their new orchard is now irrigated with a drip system that pumps water from the irrigation canal through a filter to the trees. "Since we've installed the drip system, we've had tremendous survival rate on the trees we plant," said Petersen.

Their conservation plan also included the establishment of a protective cover crop between the trees. NRCS, with help from Dr. Funk, recommended a mix of drought tolerant grasses, but warned against including



*Carol Petersen (left) and NRCS Conservationist Alan Hales check the drip irrigation system on the Petersen Tree Farm.*

legumes, which can attract orchard pests. Hales noted that such cover crops are quite unique in the fruit growing areas of northern Utah, where most producers till the ground between the trees. "We were pretty excited when the Petersen's were willing to put in a cover crop, which obviously helps protect the soil from wind and water erosion," he added.

What does this pioneering effort in plant breeding have to offer? Tim Ford, IPPFBE's president and director of plant breeding, points out that if current efforts to breed productive almonds, pistachios and apricots succeed, vast areas of the Intermountain West could be used for perennial food crops. Their most drought-tolerant trees, the almond and pistachio, "could fill a huge niche in the foothill zone and marginal cropland and rangelands of the West," he said.

The Petersen's have a strong commitment to care for and use the land to its fullest potential. "I think we have an obligation to take care of this land so we can pass on something to our children," she said.

*USDA is an equal opportunity provider and employer.*